CLAIMS

1.   A method for transmitting image data to a receiving unit, the method comprising:

receiving a plurality of input data from an in vivo imager.;

producing selected data from said plurality of input data, the selected data being less data than the input data; and

transmitting said selected data.

2.   The method according to claim 1, wherein said producing selected data includes at least producing selected data from said plurality of input data according to a dilution pattern.

3.   The method according to claim 2, wherein producing selected data comprises modifying at least one input datum by reference to at least one other input datum to produce selected data.

4.   The method according to claim 3, wherein modifying said at least one input datum comprises averaging said at least one input datum with at least one other input datum.

5.   The method according to claim 1, comprising generating reconstructed data based on said selected data.

6.   The method according to claim 5, wherein generating reconstructed data comprises interpolating said selected data.

7.   The method according to claim 5, wherein interpolating is selected from a group including: linear interpolation, quadratic interpolation, bicubic interpolation, polynomial interpolation, and weighted average interpolation.

8.   The method according to claim 1, comprising performing a gradient evaluation on selected data.

9.   The method according to claim 5, comprising determining if a datum from the selected data is on an edge. see page 13 / ln 17

10.   The method according to claim 5, comprising performing color suppression.

11.   The method according to claim 5, comprising performing intensity adjustment.

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12.   The method according to claim 6, comprising correcting for interpolation artifacts.

13.   The method according to claim 5, comprising performing image sharpening.

14.   The method of claim 1, wherein said plurality of input data includes at least a plurality of data corresponding to pixels, and wherein producing said selected data from said plurality of input data comprises producing said selected data by selecting a subset of said plurality of data corresponding to said pixels.

15.   An in vivo imaging system comprising:

an imager to receive a plurality of input data corresponding to an image;

a transmitter to transmit a selection of said input data;

a receiver to receive said selection of input data; and

a processor to interpolate reconstructed data based on said selection of input data.

16.   The in vivo imaging system of claim 15, wherein said imager is to produce said selection of said input data.

17.   The in vivo imaging system of claim 15, comprising a display for viewing a display image corresponding to said selection of input data and said reconstructed data.

18.   An in vivo device comprising:

an imager; and

a controller to:

receive a plurality of input data corresponding to an image; and

produce a selection of said input data, said selection of data including less data than the input data.

19.   The in vivo device of claim 18, wherein said controller is to produce said selection of said input data based on a dilution pattern.

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20.   The in vivo device of claim 18, wherein said controller is to produce said selection of input data by modifying an input datum by reference to at least one other input datum.

21.   The in vivo device of claim 18, wherein said controller is to

5   modify said at least one input datum by averaging said at least one input datum with at least one other input datum.

22.   The in vivo device of claim 18, wherein said plurality of input data includes at least a plurality of data corresponding to pixels, and wherein said controller is to produce said selected data by selecting a subset

10   of said plurality of data corresponding to said pixels.

23.   The in vivo device of claim 18, wherein the device is an autonomous capsule.

24.   An in vivo device comprising:

        input means for receiving a plurality of input data

15   corresponding to an image; and

        selection means for producing a selection of said input data.

25.   A method for reconstructing an image from selected image data, the method comprising:

20   receiving selected image data from an in-vivo device, wherein said selected image data includes less data than an input data;   pre-processing selected image data; and

        interpolating selected image data.

26.   The method of claim 25, wherein interpolating is selected

25   from a group including: linear, quadratic, bicubic, polynomial, and weighted average interpolation.

27.   The method of claim 25, wherein interpolating includes the step of producing additional image data resulting in a reconstructed image.

28.   The method of claim 25 comprising post processing

30   interpolated image data.

29.   The method of claim 28, wherein post-processing is selected from a group including: image sharpening, color suppression, intensity adjustment, convolution and applying a median filter.

30.   The method of claim 25, wherein pre-processing is selected from a group including applying an error correction code, reducing noise, and detecting edges.

· 31.   The method according to claim 25, comprising constructing a display image based on said reconstructed data.

32.   A system for reconstructing an image, the system comprising:

> a controller to:
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> receive selected image data from an in-vivo device;
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> pre-process the selected image data; and
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> interpolate the selected image data to produce reconstructed image data, so that the reconstructed image data includes more data than selected image data.

33.   The system of claim 32, wherein interpolating is selected from a group including: linear interpolation, quadratic interpolation, bicubic interpolation, polynomial interpolation, and weighted average interpolation.

34.   The system of claim 32, wherein interpolating includes the step of producing additional image data resulting in a reconstructed image.

35.   The system of claim 32 comprising post processing interpolated image data.

36.   The system of claim 35, wherein post-processing is selected from a group including: image sharpening, color suppression, intensity adjustment, convolution and applying a median filter.

37.   The system of claim 32, wherein pre-processing is selected from a group including applying error correction code, reducing noise, gradient evaluation, and detecting edges.

38.   The in vivo device of claim 32, wherein the controller is to generate reconstructed data based on said selected image data.

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